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EXAMINER

HUYNH, THU V

ART UNIT	PAPER NUMBER
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2178

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/825,453

Applicant(s)

SIMON ET AL.

Examiner

Thu V. Huynh

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 4-7, 9-11, 13-19, 22, 24-27, 29-31 and 33-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4-7, 9-11, 13-19, 22, 24-27, 29-31, 33-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04/03/01 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to communications: RCE filed on 04/25/05 which has CIP filed on 04/27/00.
2. Claims 1, 4-7, 9-11, 13-19, 22, 24-27, 29-31, 33-39 are pending in the case. Claims 1, 16, and 36-38 are independent claims.
3. All pending claims are amended.
4. The rejections of claims 6, 14-15, 26, 34-35 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention have been withdrawn in view of the amendment.
5. The rejections of claims 1-35 and 37-39 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter, have been withdrawn in view of the amendment.

Claim Objections

6. **Claims 1, 9, 16, 29, 36-38 are objected to because of the following informalities:**

Regarding independent claims 1, 16, 36-37, the use of “each of said page layouts are capable of ...” has typographical error (verb “are” should be “is”). Appropriate correction is required.

Regarding claims 9 and 29, the use of “a iteration” in line 2 has typographical error. Appropriate correction is required.

Regarding independent claim 38, the use of “each of said page layouts capable of ...” has typographical error (missing a verb “is”). Appropriate correction is required.

Regarding independent claim 37, the amendment of “wherein any one of said plurality of images ... page layouts r” has typographical error. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. **Claims 1, 4-7, 9-11, 13-19, 22, 24-27, 29-31, 33-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

The term "may be" in claims 1, 16 and 36-38 is a relative term which renders the claim indefinite. The term "may be" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is not clear what the meets and bounds of “may be” in the context of claims 1, 16 and 36-38.

Dependent claims 4-7, 9-11, 13-15, 17-19, 22, 24-27, 29-31, 33-35, 37-39 are rejected for fully incorporating the dependencies of their base.

The term “little or no” in claims 9 and 29 is a relative term which renders the claim indefinite. The term " little or no" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is not clear what the meets and bounds of “little” in the context of claims 9-11 and 29-31.

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Dependent claims 10-11 and 30-31 are rejected for fully incorporating the dependencies of their base.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. **Claim 37 is rejected under 35 U.S.C. 102(e) as being anticipated by King et al., US 5,956,737, patented 09/1999.**

Regarding independent claim 37, King teaches the steps of:

- providing a plurality of digital images (King, col.3, lines 31-51; col.4, lines 34-41, 45-50; col.21, line 60 – col.23, line 20; col.35, lines 8-25; providing images, such as “fish logo”, “rods” and “nets” images which are digital images, since King’s method is performed on a computer);
- providing at least one image placeholder (King, figures 8-11; providing at least one image placeholder with rectangle dimension for fill in at least one of said images);
- selecting a number of said images and said at least one image placeholder for placement on said predetermined format (King, col.18, lines 15-56; selecting “fish logo” and “rods” images and at least one image place holder for placement on predetermined format);

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- grouping said plurality of images and said image placeholder into a plurality of different page layouts, each of page layouts is capable of being printed and having white space between said plurality of digital image and said at least one image placeholder wherein any one of said plurality of images may be located in any position in said plurality of different page layouts (King, col.18, lines 15-56; grouping “fish logo” and “rods” images and said image placeholder into different page layouts; each of page layouts capable to be a printed page and/or reviewed in print preview; one of the images may be located in any position in different page layouts based on user edits the content);
- analyzing each of said different page layouts in accordance with respect to the amount of white space in each of said plurality of different page layouts and selecting the page layout based on the amount of white space determined for each of said plurality of page layouts (King, col.3, lines 19-21 and col.41, lines 7-10, the media tree analysis proceeds until primitives a reached, wherein a white space scale factor in determining how layouts are arrived at to choose the eventual layout).

9. Claim 37 is rejected under 35 U.S.C. 102(e) as being anticipated by Koba, US 6,222,947 B1, filed 02/1998.

Regarding independent claim 37, Koba teaches the steps of:

- providing a plurality of digital images (Koba, col.1, lines 6-8 and col.2, lines 4-51 input plurality of digital images to be laid out on a page);
- providing at least one image placeholder (Koba, col.6, lines 7-20; providing at least one page layout including at least one layout position of an image);

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- selecting a number of said images and said at least one image placeholder for placement on said predetermined format (Koba, figures 5A-5; col.5, lines 36-42; col.6, lines 21-45; and col.6, lines 7-20; selecting a number of said a plurality input images and said image placeholder for placement on a page layout based on user input parameters);
- grouping said plurality of images and said image placeholder into a plurality of different page layouts (Koba, figures 5A-5; col.5, lines 36-42; and col.6, lines 7-52; grouping a plurality input images and said image placeholder into a plurality of page layouts based on user input parameters), each of said page layouts capable of being printed and having white space between said plurality of digital images and said at least one image placeholder (Koba, col.6, lines 43-54; col.7, lines 37-41; col.8, lines 12-14; and figures 5F; 6A-6B; printing the page layouts and each of page layout has bank space (white space) between the images and the layout position of an image) wherein any one of said plurality of images may be located in any position in said plurality of different page layouts (Koba, col.5, lines 36-56; col.6, lines 7-20; a particular image may be located in any position in plurality of different page layout based upon user inputs information);
- analyzing each of said different page layouts in accordance with respect to the amount of white space in each of said plurality of different page layouts and selecting the page layout based on the amount of white space determined for each of said plurality of page layouts (Koba, col.5, lines 36-56; col.6, lines 43-57; figure 4 and corresponding text; analyzing each different page layouts to indicate a “layout is poor

in balance with an excessive blank space”; determining a better layout with white space for each of said plurality of page layouts).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

(b) This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. **Claims 1, 5, 14-15, 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over King et al., US 5,956,737, patented 09/1999 in view of Seaman, US 6,415,306, filed 01/1999.**

Regarding independent claim 1, King teaches a method of organizing a plurality of digital images including at least one image placeholder in predetermined page format (King, col.2, lines 52-66; col.3, lines 31-51; col.21, line 60 – col.23, line 20 and corresponding figures), comprising the steps of:

- grouping said plurality of images into a plurality of different page layouts wherein any one of said plurality of images may be located in any position in said plurality of different page layouts, each of said page layouts capable of being printed and having white space between said plurality of images and said at least one image placeholder, wherein said plurality of images are not placed in said placeholder (King, col.3, lines

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- 31-51; col.4, lines 34-41, 45-50; col.18, lines 15-56; col.21, line 60 – col.23, line 20; col.35, lines 8-25 and corresponding figures; grouping images, such as “fish logo”, “rods” and “nets” images into different page layouts (figures 9-11) using a media tree of different page layouts, wherein any one of said images may be located in the top, bottom, right or left in said plurality of different page layouts, each of page layouts capable to be a printed page and/or reviewed in print preview, wherein said plurality of images, such as both “Rods” and “Nets” are not placed in image placeholder for “Rods” image);
- analyzing each of said different page layouts in accordance with the amount of white space in each of said plurality of different page layout and selecting the page layout paged on the amount of white space determined for each of said plurality of different page layouts (King, col.3, lines 19-21 and col.41, lines 5-10, the media tree analysis proceeds until primitives a reached, wherein a white space scale factor in determining how layouts are arrived at to choose the eventual layout).

King does not explicitly disclose spatially balancing said white space between said plurality of digital images and said at least one image placeholder in accordance with the amount of white space in each of said plurality of different page layouts.

Seaman teaches balancing white space between plurality of digital image to create aesthetically pleasing layouts; and each of page layout capable of being printed, (Seaman, col.3, lines 12-33; col.7, line 59 – col.8, lines 62; col.8, line 63 – col.9, lines 12).

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It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Seaman's equalization of white space into King's layout to provide aesthetically pleasing layouts as Seaman disclosed in col.3, lines 29-31.

Regarding claim 5, which is dependent on claim 1, King teaches scaling the plurality of digital images of said selected page layout by different amounts (King, col.41, lines 1-2 and col.49, lines 48-58; scale factors may apply to particular design components. This implies scaling the images of selected page layout by different amounts, wherein the images are digital image since King's method is performed on a computer).

Regarding claim 14, which is dependent on claim 1, King does not explicitly teach wherein said white space is determined vertically between adjacent images in said page layouts.

Seaman teaches white space is determined vertically between adjacent images in said page layout (Seaman, col.7, line 59 – col.8, lines 62).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Seaman and King to have said white space be determined vertically between adjacent images in said page layouts in order to organize the components for the layout efficiently, since the combination would have provided aesthetically pleasing layouts as Seaman disclosed.

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Regarding claim 15, which is dependent on claim 1, King does not explicitly teach wherein said white space is determined horizontally between adjacent images in said page layouts.

Seaman teaches white space is determined horizontally between adjacent images in said page layout (Seaman, col.7, line 59 – col.8, lines 62).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Seaman and King to have said white space be determined horizontally between adjacent images in said page layouts in order to organize the components for the layout efficiently, since the combination would have provided aesthetically pleasing layouts as Seaman disclosed.

Regarding independent claim 38, claim 38 disclose a method similar to claim 1, King also teaches the step of storing said selected page layout for later use (King, col.10, line 57 – col.11, lines 48-52 and col.48, lines 7-11 and fig.37). Therefore, claim 38 is rejected under the same rationale.

Regarding dependent claim 39, which is dependent on claim 38, King teaches wherein said stored page layout is used with a second plurality set of images (King, col.10, line 57 – col.11, lines 48-52 and col.48, lines 7-11 and fig.37).

12. Claims 4 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable

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over King in view of Seaman as applied to claims 1 and 4 above, and further in view of Ross et al., US 6,026,417, filed 05/1997.

Regarding claim 4, which is dependent on claim 1, King does not explicitly teaches wherein said analyzing said different page layouts comprises scoring each of said different page layouts.

Ross teaches how a Page Manager calculates a closeness score as part of preparing page layouts in order to aid the decision process (Ross, col.28, lines 42-65), which constitutes a situation wherein analyzing said different page layouts comprises scoring each of said different page layout.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Ross and King, since this would used Ross's scoring to aid the decision process of King's invention.

Regarding claim 9, which is dependent on claim 4, King teaches the user of recursive design tree to compare various layouts (King, abstract). Since recursion is internally represented by iteration, this process necessarily involves analyzing of said different page layouts that comprising a iteration of different page layouts and selecting the best page layout until the criteria are best met. However, King does not explicitly teach a situation where little or no further improvement in scoring is obtained.

Ross teaches how a Page Manager calculates a closeness score as part of preparing page layouts in order to aid the decision process (Ross, col.28, lines 42-65), which constitutes a

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situation wherein analyzing said different page layouts comprises scoring each of said different page layout.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Ross and King, since this would used Ross's scoring to aid the decision process of King's invention.

Regarding claim 10, which is dependent on claim 9, King and Ross teach the limitations of claim 9 as explained above. King teaches scaling individual images of the page layout obtained after said iteration (King, col.19, lines 1-4; col.40, lines 52-54; col.41, lines 1-10; col.46, lines 57-65; scale factors may be used to adjust components' fit in the layout process).

13. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over King in view of Seaman as applied to claim 1 above, and further in view of Nakatake et al., as supplied by the Application in IDS filed on 04/03/2001.

Regarding claim 6, which is dependent on claim 1, King does not explicitly teach wherein the amount of white space is minimized by using stochastic algorithms.

Nakatake's teachings are relevant to an analogous situation, in which chips are arranged on an intergrated circuit. In this situation, Nakatake refers to using simulated annealing, which is a type of stochastic algorithm, because it packs with good area efficiency and therefor minimizes white space (Nakatake, page 487-488).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Nakatake and King, since Nakatake's method of

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simulated annealing to pack with good area efficiency, thereby resulting in a method wherein the amount of white space is minimized by using stochastic algorithm.

14. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over King as applied to claim 1 above, and further in view of Fukui et al., US 5,742,837, patented 1998.

Regarding claim 7, which is dependent on claim 1, King does not explicitly teach wherein said grouping said plurality of digital images includes placing said plurality of digital images in said different page layouts in a non-overlapping pattern.

Fukui teaches lists lack of overlapping as a criterion because it allows for an aesthetically pleasing layout (Fukui, col.7, lines 59-60).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Fukui and King to include placing images in said different page layout in a non-overlapping pattern, since this would avoid overlap in order to arrive at a more aesthetically pleasing layout as Fukui disclosed.

15. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over King in view of Seaman and further in view Ross as applied to claim 9 above, and further in view of Bottomly, US 5,900,002, patented 1999.

Regarding claim 11, which is dependent on claim 9, King and Ross teach the limitations of claim 9 as explained above. King does not explicitly disclose rotating said images a predetermined amount.

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Bottomly teaches a process by which regions of the page are rotated 180 degrees to aid in orienting (Bottomly, col.4, lines 21-31).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Bottomly and King to rotating said images a predetermined amount, since Bottomly's method of rotating 180 degrees would have aided in orienting in page layout.

16. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over King in view of Seaman as applied to claim 1 above, and further in view of Burn, US 6,014,137, filed 02/1997.

Regarding claim 13, which is dependent on claim 9, King and Ross teaches the limitations of claim 9 as explained above. King does not explicitly teach positioning said plurality of digital images in said selected page layout so as to provide a desired border on said page.

Burns teaches the use of window borders in a kiosk authoring system that would require image arrangement in order to present the user with an aesthetically pleasing layout (Burns, col.3, line 59).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Burns' border and King, since this would have presented the user with an aesthetically pleasing layout.

17. Claims 16, 25, 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable

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over King et al., US 5,956,737, patented 09/1999 and in view of Koba, US 6,222,947 B1, filed 02/1998 and Seaman, US 6,415,306, filed 01/1999.

Regarding independent claim 16, King teaches a method of finding a layout for composition, which may consist of images only. The method comprising the steps of:

- grouping said plurality of images into a plurality of different page layouts wherein any one of said plurality of images may be located in any position in said plurality of different page layouts, each of page layouts capable of being printed and having white space between said plurality of digital images (King, col.3, lines 31-51; col.4, lines 34-41, 45-50; col.18, lines 15-56; col.21, line 60 – col.23, line 20; col.35, lines 8-25 and corresponding figures; grouping images, such as “fish logo”, “rods” and “nets” images into different page layouts (figures 9-11) using a media tree of different page layouts wherein one of the images may be located in any position in different page layouts, such as top, bottom, right, left based on user edits the content, each of page layouts capable to be a printed page and/or reviewed in print preview, wherein said plurality of images, such as both “Rods” and “Nets” are not placed in image placeholder for “Rods” and are digital images since King’s method is performed on a computer);
- analyzing each of said different page layouts in accordance with respect to the amount of white space in each of said plurality of different page layouts and selecting the page layout based on the amount of white space determined for each of said plurality of page layouts (King, col.3, lines 19-21 and col.41, lines 5-10, the media

tree analysis proceeds until primitives are reached, wherein a white space scale factor in determining how layouts are arrived at to choose the eventual layout).

King does not explicitly disclose the steps of identifying an image to be used as a background image and grouping said plurality of images into a plurality of different page layouts *including said background image*; and spatially balancing said white space between said plurality of digital images in accordance with the amount of white space in each of said plurality of different page layouts.

Koba teaches method for laying out a plurality of images to plurality of pages includes the steps of:

- grouping said plurality of images into a plurality of different page layouts including a background image wherein any one of said plurality of images may be located in any position in said plurality of different page layouts, (Koba, figures 5A-5G; col.4, lines 30-44; col.5, lines 36-42; and col.6, lines 7-45; grouping input images into different page layouts including a background image, wherein one of said images may be located in any position in the page layouts based on user's inputted information), each of said page layouts capable of being printed and having white space between said plurality of digital image and said predefined area (Koba, col.6, lines 43-54; col.7, lines 37-41; col.8, lines 12-14; and figures 5F; 6A-6B; printing the page layouts, wherein each of page layout has blank space (white space) between the images);
- analyzing each of said different page layouts in accordance with respect to the amount of white space in each of said plurality of different page layouts and selecting the page layout based on the amount of white space determined for each of said

plurality of page layouts (Koba, col.5, lines 36-56; col.6, lines 43-57; figure 4 and corresponding text; analyzing each different page layouts to indicate a “layout is poor in balance with an excessive blank space”; determining a better layout with white space for each of said plurality of page layouts).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Koba and King to provide such layout with background image, since this would have obtained an intuitively beautiful layout as Koba disclosed in col.5, lines 38-42.

Seaman teaches balancing white space between plurality of digital image and predefined area to create aesthetically pleasing layouts; and each of page layout capable of being printed, (Seaman, col.3, lines 12-33; col.7, line 59 – col.8, lines 62; col.8, line 63 – col.9, lines 12).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Seaman’s equalization of white space into Koba’s layout to provide aesthetically pleasing layouts as Seaman disclosed in col.3, lines 29-31.

Regarding claim 25, which is dependent on claim 16, King teaches scaling the images of said selected page layout by different amounts (King, col.41, lines 1-10; col.46, lines 57-65; scale factors may apply to particular design components. This implies scaling the images of selected page layout by different amounts).

Regarding claim 34, which is dependent on claim 23, King does not explicitly teach wherein said white space is determined vertically between adjacent images in said page layouts.

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Seaman teaches white space is determined vertically between adjacent images in said page layout (Seaman, col.7, line 59 – col.8, lines 62).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Seaman and King to have said white space be determined vertically between adjacent images in said page layouts in order to organize the components for the layout efficiently, since the combination would have provided aesthetically pleasing layouts as Seaman disclosed.

Regarding claim 35, which is dependent on claim 23, King teaches wherein said white space is determined horizontally between adjacent images in said page layouts.

Seaman teaches white space is determined horizontally between adjacent images in said page layout (Seaman, col.7, line 59 – col.8, lines 62).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Seaman and King to have said white space be determined horizontally between adjacent images in said page layouts in order to organize the components for the layout efficiently, since the combination would have provided aesthetically pleasing layouts as Seaman disclosed.

18. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over King in view of Koba and Seaman as applied to claim 16 above and further in view of Yamamoto et al., US 6,424,742 B2, filed 08/1998.

Regarding claim 17, which is dependent on claim 16, King and Koba teach the limitations of claim 16 as explained above. Koba does not explicitly disclose wherein said background image is displayed with at least one reduced characteristic.

Yamamoto teaches a background image is an image has very slow density (Yamamoto, col.10, lines 1-14).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Yamamoto into King and Koba to display background image with reduced characteristic, since this would have provide very slow density image as a background image.

Regarding claim 18, which is dependent on claim 17, King, Koba and Yamamoto teach the limitations of claim 17 as explained above. Yamamoto teaches reduced characteristic is color density. Yamamoto does not explicitly disclose wherein said at least one reduced characteristic is color saturation.

However, it would have been obvious to a person of ordinary skill in the art at the time at the invention was made to have modified Yamamoto to include color saturation as reduced characteristic of the background image, since it was well known in the art at the time the invention that saturation, lightness, intensity, contrast are attributes or characteristic of an image.

Regarding claim 19, which is dependent on claim 17, King, Koba and Yamamoto teach the limitations of claim 17 as explained above. King teaches identifying at least one image to be placed at a predetermined image location (King, col.18, lines 1-16).

19. Claims 24 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over King in view of Koba and Seaman as applied to claim 16 above, and further in view of Ross et al., US 6,026,417, filed 05/1997.

Regarding claim 24, which is dependent on claim 16, King does not explicitly teaches wherein said analyzing said different page layouts comprises scoring each of said different page layouts.

Ross teaches how a Page Manager calculates a closeness score as part of preparing page layouts in order to aid the decision process (Ross, col.28, lines 42-65), which constitutes a situation wherein analyzing said different page layouts comprises scoring each of said different page layout.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Ross and King, since this would used Ross's scoring to aid the decision process of King's invention.

Regarding claim 29, which is dependent on claim 16, King the user of recursive design tree to compare various layouts (King, abstract). Since recursion is internally represented by iteration, this process necessarily involves analyzing of said different page layouts that comprising a iteration of different page layouts and selecting the best page layout until the criteria are best met. However, King does not explicitly teach a situation where little or no further improvement in scoring is obtained.

Ross teaches how a Page Manager calculates a closeness score as part of preparing page layouts in order to aid the decision process (Ross, col.28, lines 42-65), which constitutes a situation wherein analyzing said different page layouts comprises scoring each of said different page layout.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Ross and King, since this would used Ross's scoring to aid the decision process of King's invention.

Regarding claim 30, which is dependent on claim 29, King, Koba and Ross teach the limitations of claim 29 as explained above. King teaches scaling individual images of the page layout obtained after said iteration (King, col.19, lines 1-4; col.40, lines 52-54; col.41, lines 1-10; col.46, lines 57-65; scale factors may be used to adjust components' fit in the layout process).

20. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over King in view of Koba and Seaman as applied to claim 16 above, and further in view of Nakatake et al., as supplied by the Application in IDS filed on 04/03/2001.

Regarding claim 26, which is dependent on claim 16, King does not explicitly teach wherein the amount of white space is minimized by using stochastic algorithms.

Nakatake's teachings are relevant to an analogous situation, in which chips are arranged on an intergrated circuit. In this situation, Nakatake refers to using simulated annealing, which is a type of stochastic algorithm, because it packs with good area efficiency and therefor minimizes white space (Nakatake, page 487-488).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Nakatake and King, since Nakatake's method of simulated annealing to pack with good area efficiency, thereby resulting in a method wherein the amount of white space is minimized by using stochastic algorithm.

21. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over King in view of Koba and Seaman as applied to claim 16 above, and further in view of Fukui et al., US 5,742,837, patented 1998.

Regarding claim 27, which is dependent on claim 16, King does not explicitly teach wherein said grouping of said plurality of digital images in said different page layouts is done in a non-overlapping pattern.

Fukui teaches lists lack of overlapping as a criterion because it allows for an aesthetically pleasing layout (Fukui, col.7, lines 59-60).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Fukui and King to include placing images in said different page layout in a non-overlapping pattern, since this would avoid overlap in order to arrive at a more aesthetically pleasing layout as Fukui disclosed.

22. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over King in view of Koba and Seaman and further in view of Ross as applied to claim 29 above, and further in view of Bottomly, US 5,900,002, patented 1999.

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Regarding claim 31, which is dependent on claim 29, King, Koba and Ross teach the limitations of claim 29 as explained above. King does not explicitly disclose rotating said images a predetermined amount.

Bottomly teaches a process by which regions of the page are rotated 180 degrees to aid in orienting (Bottomly, col.4, lines 21-31).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Bottomly and King to rotating said images a predetermined amount, since Bottomly's method of rotating 180 degrees would have aided in orienting in page layout.

23. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over King in view of Koba and Seaman and further in view of Ross as applied to claim 29 above, and further in view of Burn, US 6,014,137, filed 02/1997.

Regarding claim 33, which is dependent on claim 29, King, Koba and Ross teaches the limitations of claim 29 as explained above. King does not explicitly teach positioning said images in said selected page layout so as to provide a desired border on said page.

Burns teaches the use of window borders in a kiosk authoring system that would require image arrangement in order to present the user with an aesthetically pleasing layout (Burns, col.3, line 59).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Burns' border and King, since this would have presented the user with an aesthetically pleasing layout.

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24. Claims 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over King et al., US 5,956,737, patented 09/1999.

Regarding independent claim 36, claim 36 is for a computer software product performing method of claim 1 and is reject under the same rationale.

However, King does not explicitly disclose a system wherein a computer software product for laying out plurality of input image in predetermined format comprising a computer readable storage medium having a computer program.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have recognized that to performing the King's invention, a program/software must be stored in computer to execute such function.

25. Claims 1, 5, 14-15, 36, 38-39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koba, US 6,222,947 B1, filed 02/1998, in view of Seaman, US 6,415,306 B2, filed 01/1999.

Regarding independent claim 1, Koba teaches the steps of:

- grouping said plurality of images into a plurality of different page layouts (Koba, figures 5A-5F; 6A-6B; col.5, lines 36-42; and col.6, lines 7-52; grouping a plurality input images (fig.5B) and at least one image placeholder (fig.6A-6B) into a plurality of page layouts based on user input parameters) wherein any one of said plurality of images may be located in any position in said plurality of different page layouts (Koba, col.5, lines 36-56; col.6, lines 7-20; a particular image may be located in any

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position in plurality of different page layout based upon user inputs information), each of said page layouts capable of being printed and having white space between said plurality of images and said at least one image placeholder, wherein said plurality of images are not placed in said placeholder (Koba, col.6, lines 20-54; col.7, lines 37-41; col.8, lines 12-14; and figures 5A-F; 6A-6B; printing the page layouts; each of page layout has bank space (white space) between the images and the image placeholder; and wherein said plurality of images, such as images 2 and 3, are not placed in the placeholder of image 1 in fig.5F or one of place holder of figures 6A or 6B);

- analyzing each of said different page layouts in accordance with the amount of white space in each of plurality of different page layouts and selecting the page layout based on the amount of white space determined for each of said plurality of different page layouts (Koba, col.5, lines 36-56; col.6, lines 43-57; figure 4 and corresponding text; analyzing each different page layouts to indicate a “layout is poor in balance with an excessive blank space”; determining a better layout with white space for each of said plurality of page layouts).

Koba does not explicitly disclose spatially balanced said white space between said plurality of digital image and said predefined area.

Seaman teaches balancing white space between plurality of digital image to create aesthetically pleasing layouts; and each of page layout capable of being printed, (Seaman, col.3, lines 12-33; col.7, line 59 – col.8, lines 62; col.8, line 63 – col.9, lines 12).

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It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Seaman's equalization of white space into Koba's layout to provide aesthetically pleasing layouts as Seaman disclosed in col.3, lines 29-31 as well as Koba's suggested, "an intuitively beautiful layout", "a neat layout" (Koba, col.5, lines 38; col.6, lines 17-18).

Regarding claim 5, which is dependent on claim 1, Koba teaches scaling the plurality of digital images of said selected page layout by different amounts (Koba, col.5, lines 36-40; col.7, lines 37-41; adjusting the sizes of images).

Regarding claim 14, which is dependent on claim 1, Seaman teaches white space is determined vertically between adjacent images in said page layout (Seaman, col.7, line 59 – col.8, lines 62).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Seaman and Koba to have said white space be determined vertically between adjacent images in said page layouts in order to organize the components for the layout efficiently, since the combination would have provided aesthetically pleasing layouts as Seaman disclosed.

Regarding claim 15, which is dependent on claim 1, Seaman teaches white space is determined horizontally between adjacent images in said page layout (Seaman, col.7, line 59 – col.8, lines 62).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Seaman and Koba to have said white space be determined horizontally between adjacent images in said page layouts in order to organize the components for the layout efficiently, since the combination would have provided aesthetically pleasing layouts as Seaman disclosed.

Regarding independent claim 36, Koba teaches computer software product for laying out plurality of input image in predetermined format comprising a computer readable storage medium having a computer program wherein any one of said plurality of images may be located in any position in said plurality of different page layouts (Koba, col.3, lines 20-31 and col.11, lines 62-65) which when loaded into a computer cause the computer to perform the steps of:

- grouping said plurality of images into a plurality of different page layouts (Koba, figures 5A-5G; col.5, lines 36-42; and col.6, lines 21-45; grouping input images into different page layouts, wherein said images, such as images 2 and 3, are not placed in a predefined area on said page, such as a predefined area 1 in fig.5F or a predefined area for header which contain the page number), wherein said plurality of images are not placed in a predefined area on said page (Koba, col.5, lines 36-56; col.6, lines 7-20; a particular image may be located in any position in plurality of different page layout based upon user inputs information), each of said page layouts capable of being printed and having white space between said plurality of digital image and said predefined area (Koba, col.6, lines 43-54; col.7, lines 37-41; col.8, lines 12-14; and

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figures 5F; 6A-6B; printing the page layouts, wherein each of page layout has bank space (white space) between the images and the predefined area);

- analyzing each of said different page layouts in accordance with respect to the amount of said white space in each of said plurality of different page layouts and selecting the page layout based on said amount of white space determined for each of said plurality of different page layouts (Koba, col.5, lines 36-56; col.6, lines 43-66; figure 4 and corresponding text; analyzing each different page layouts in accordance with initial parameters as well as blank space of each page to select an appropriate layout).

Koba does not explicitly disclose spatially balanced said white space between said plurality of digital image and said predefined area.

Seaman teaches balancing white space between plurality of digital image and predefined area to create aesthetically pleasing layouts; and each of page layout capable of being printed, (Seaman, col.3, lines 12-33; col.7, line 59 – col.8, lines 62; col.8, line 63 – col.9, lines 12).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Seaman's equalization of white space into Koba's layout to provide aesthetically pleasing layouts as Seaman disclosed in col.3, lines 29-31.

Regarding independent claim 38, claim 38 disclose a method similar to claim 1, Koba also teaches the step of storing said selected page layout for later use (Koba, col.8, lines 1-9; storing satisfactory layout for subsequent layout). Therefore, claim 38 is rejected under the same rationale.

Regarding dependent claim 39, which is dependent on claim 38, King teaches wherein said stored page layout is used with a second plurality set of images (Koba, col.8, lines 1-9; storing satisfactory layout for subsequent layout).

26. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable Koba in view of Seaman and further in view of Ross et al., US 6,026,417, filed 05/1997.

Regarding claim 4, which is dependent on claim 1, Koba does not explicitly teaches wherein said analyzing said different page layouts comprises scoring each of said different page layouts.

Ross teaches how a Page Manager calculates a closeness score as part of preparing page layouts in order to aid the decision process (Ross, col.28, lines 42-65), which constitutes a situation wherein analyzing said different page layouts comprises scoring each of said different page layout.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Ross and Koba, since this would used Ross's scoring to aid the decision process of Koba's invention.

27. Claims 9-10 is rejected under 35 U.S.C. 103(a) as being unpatentable Koba in view of Seaman and Ross and further in view of King et al., US 5,956,737, patented 09/1999.

Regarding claim 9, which is dependent on claim 4, Koba does not explicitly disclose iteration of comparing sequentially two different page layouts and selecting the best page layout until little or no further improvement in scoring is obtained.

King teaches the user of recursive design tree to compare various layouts (King, abstract). Since recursion is internally represented by iteration, this process necessarily involves analyzing of said different page layouts that comprising a iteration of different page layouts and selecting the best page layout until the criteria are best met.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined King's iteration into Koba's analyzing layout process, since the combination would have helped to selecting the best page layout.

However, King does not explicitly teach a situation where little or no further improvement in scoring is obtained.

Ross teaches how a Page Manager calculates a closeness score as part of preparing page layouts in order to aid the decision process (Ross, col.28, lines 42-65), which constitutes a situation wherein analyzing said different page layouts comprises scoring each of said different page layout.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Ross and King, since this would used Ross's scoring to aid the decision process of King's invention.

Regarding claim 10, which is dependent on claim 9, King teaches scaling individual images of the page layout obtained after said iteration (King, col.19, lines 1-4; col.40, lines 52-

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54; col.41, lines 1-10; col.46, lines 57-65; scale factors may be used to adjust components' fit in the layout process).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined King's iteration into Koba's analyzing layout process, since the combination would have helped to selecting the best page layout.

28. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koba in view of Seaman as applied to claim 1 above, and further in view of Nakatake et al., as supplied by the Application in IDS filed on 04/03/2001.

Regarding claim 6, which is dependent on claim 1, Koba does not explicitly teach wherein the amount of white space is minimized by using stochastic algorithms.

Nakatake's teachings are relevant to an analogous situation, in which chips are arranged on an integrated circuit. In this situation, Nakatake refers to using simulated annealing, which is a type of stochastic algorithm, because it packs with good area efficiency and therefor minimizes white space (Nakatake, page 487-488).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Nakatake and Koba, since Nakatake's method of simulated annealing to pack with good area efficiency, thereby resulting in a method wherein the amount of white space is minimized by using stochastic algorithm.

29. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koba in

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view of Seaman as applied to claim 1 above, and further in view of Fukui et al., US 5,742,837, patented 1998.

Regarding claim 7, which is dependent on claim 1, Koba does not explicitly teach wherein said grouping said plurality of digital images includes placing said plurality of digital images in said different page layouts in a non-overlapping pattern.

Fukui teaches lists lack of overlapping as a criterion because it allows for an aesthetically pleasing layout (Fukui, col.7, lines 59-60).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Fukui and Koba to include placing images in said different page layout in a non-overlapping pattern, since this would avoid overlap in order to arrive at a more aesthetically pleasing layout as Fukui disclosed.

30. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over King in view of Seaman and further in view Ross and King as applied to claim 9 above, and further in view of Bottomly, US 5,900,002, patented 1999.

Regarding claim 11, which is dependent on claim 9, Koba does not explicitly disclose rotating said images a predetermined amount.

Bottomly teaches a process by which regions of the page are rotated 180 degrees to aid in orienting (Bottomly, col.4, lines 21-31).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Bottomly and Koba to rotating said images a

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predetermined amount, since Bottomly's method of rotating 180 degrees would have aided in orienting in page layout.

31. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koba in view of Seaman as applied to claim 1 above, and further in view of Burn, US 6,014,137, filed 02/1997.

Regarding claim 13, which is dependent on claim 1, Koba does not explicitly teach positioning said plurality of digital images in said selected page layout so as to provide a desired border on said page.

Burns teaches the use of window borders in a kiosk authoring system that would require image arrangement in order to present the user with an aesthetically pleasing layout (Burns, col.3, line 59).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Burns' border and Koba, since this would have presented the user with an aesthetically pleasing layout.

32. Claims 16, 25, 34-35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koba, US 6,222,947 B1, filed 02/1998 in view of Seaman, US 6,415,306, filed 01/1999.

Regarding independent claim 16, Koba teaches method for laying out a plurality of images to plurality of pages comprising the steps of:

- grouping said plurality of images into a plurality of different page layouts including a background image (Koba, figures 5A-5G; col.4, lines 30-44; col.5, lines 36-42; and

- col.6, lines 21-45; grouping input images into different page layouts including a background image) wherein any one of said plurality of images may be located in any position in said plurality of different page layouts (Koba, col.5, lines 36-56; col.6, lines 7-20; a particular image may be located in any position in plurality of different page layout based upon user inputs information), each of said page layouts capable of being printed and having white space between said plurality of digital image and said predefined area (Koba, col.6, lines 43-54; col.7, lines 37-41; col.8, lines 12-14; and figures 5F; 6A-6B; printing the page layouts, wherein each of page layout has bank space (white space) between the images); and
- analyzing each of said different page layouts in accordance with respect to the amount of white space in each of said plurality of different page layouts and selecting the page layout based on the amount of white space determined for each of said plurality of page layouts (Koba, col.5, lines 36-56; col.6, lines 43-57; figure 4 and corresponding text; analyzing each different page layouts to indicate a “layout is poor in balance with an excessive blank space”; determining a better layout with white space for each of said plurality of page layouts).

Seaman teaches balancing white space between plurality of digital image and predefined area to create aesthetically pleasing layouts; and each of page layout capable of being printed (Seaman, col.3, lines 12-33; col.7, line 59 – col.8, lines 62; col.8, line 63 – col.9, lines 12).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Seaman’s equalization of white space into Koba’s layout to provide aesthetically pleasing layouts as Seaman disclosed in col.3, lines 29-31.

Regarding claim 25, which is dependent on claim 16, Koba teaches scaling the plurality of digital images of said selected page layout by different amounts (Koba, col.5, lines 36-40; col.7, lines 37-41; adjusting the sizes of images).

Regarding claim 34, which is dependent on claim 23, Koba does not explicitly teach wherein said white space is determined vertically between adjacent images in said page layouts.

Seaman teaches white space is determined vertically between adjacent images in said page layout (Seaman, col.7, line 59 – col.8, lines 62).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Seaman and Koba to have said white space be determined vertically between adjacent images in said page layouts in order to organize the components for the layout efficiently, since the combination would have provided aesthetically pleasing layouts as Seaman disclosed.

Regarding claim 35, which is dependent on claim 23, Koba teaches wherein said white space is determined horizontally between adjacent images in said page layouts.

Seaman teaches white space is determined horizontally between adjacent images in said page layout (Seaman, col.7, line 59 – col.8, lines 62).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Seaman and Koba to have said white space be determined horizontally between adjacent images in said page layouts in order to organize the components

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for the layout efficiently, since the combination would have provided aesthetically pleasing layouts as Seaman disclosed.

33. Claims 17-19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koba in view of Seaman as applied to claim 16 above and further in view of Yamamoto et al., US 6,424,742 B2, filed 08/1998.

Regarding claim 17, which is dependent on claim 16, Koba does not explicitly disclose wherein said background image is displayed with at least one reduced characteristic.

Yamamoto teaches a background image is an image has very slow density (Yamamoto, col.10, lines 1-14).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Yamamoto into King and Koba to display background image with reduced characteristic, since this would have provide very slow density image as a background image.

Regarding claim 18, which is dependent on claim 17, Yamamoto teaches reduced characteristic is color density. Yamamoto does not explicitly disclose wherein said at least one reduced characteristic is color saturation.

However, it would have been obvious to a person of ordinary skill in the art at the time at the invention was made to have modified Yamamoto to include color saturation as reduced characteristic of the background image, since it was well known in the art at the time the invention that saturation, lightness, intensity, contrast are attributes or characteristic of an image.

Regarding claim 19, which is dependent on claim 17, King, Koba and Yamamoto teach the limitations of claim 17 as explained above. King teaches identifying at least one image to be placed at a predetermined image location (King, col.18, lines 1-16).

34. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koba in view of Seaman as applied to claim 16 above, and further in view of Ross et al., US 6,026,417, filed 05/1997.

Regarding claim 24, which is dependent on claim 16, Koba does not explicitly teaches wherein said analyzing said different page layouts comprises scoring each of said different page layouts.

Ross teaches how a Page Manager calculates a closeness score as part of preparing page layouts in order to aid the decision process (Ross, col.28, lines 42-65), which constitutes a situation wherein analyzing said different page layouts comprises scoring each of said different page layout.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Ross and King, since this would used Ross's scoring to aid the decision process of King's invention.

35. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koba in view of Seaman as applied to claim 16 above, and further in view of Nakatake et al., as supplied by the Application in IDS filed on 04/03/2001.

Regarding claim 26, which is dependent on claim 16, Koba does not explicitly teach wherein the amount of white space is minimized by using stochastic algorithms.

Nakatake's teachings are relevant to an analogous situation, in which chips are arranged on an integrated circuit. In this situation, Nakatake refers to using simulated annealing, which is a type of stochastic algorithm, because it packs with good area efficiency and therefor minimizes white space (Nakatake, page 487-488).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Nakatake and King, since Nakatake's method of simulated annealing to pack with good area efficiency, thereby resulting in a method wherein the amount of white space is minimized by using stochastic algorithm.

36. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koba in view of Seaman as applied to claim 16 above, and further in view of Fukui et al., US 5,742,837, patented 1998.

Regarding claim 27, which is dependent on claim 16, Koba does not explicitly teach wherein said grouping of said plurality of digital images in said different page layouts is done in a non-overlapping pattern.

Fukui teaches lists lack of overlapping as a criterion because it allows for an aesthetically pleasing layout (Fukui, col.7, lines 59-60).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Fukui and King to include placing images in said different

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page layout in a non-overlapping pattern, since this would avoid overlap in order to arrive at a more aesthetically pleasing layout as Fukui disclosed.

37. **Claims 29-30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koba in view of Seaman as applied to claim 16 above, and further in view of King et al., US 5,956,737, filed 09/1996 and Ross et al., US 6,026,417, filed 05/1997.**

Regarding claim 29, which is dependent on claim 16, Koba does not explicitly disclose iteration of comparing sequentially two different page layouts and selecting the best page layout until little or no further improvement in scoring is obtained.

King teaches the user of recursive design tree to compare various layouts (King, abstract). Since recursion is internally represented by iteration, this process necessarily involves analyzing of said different page layouts that comprising a iteration of different page layouts and selecting the best page layout until the criteria are best met.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined King's iteration into Koba's analyzing layout process, since the combination would have helped to selecting the best page layout.

However, King does not explicitly teach a situation where little or no further improvement in scoring is obtained.

Ross teaches how a Page Manager calculates a closeness score as part of preparing page layouts in order to aid the decision process (Ross, col.28, lines 42-65), which constitutes a situation wherein analyzing said different page layouts comprises scoring each of said different page layout.

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It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Ross and King, since this would used Ross's scoring to aid the decision process of King's invention.

Regarding claim 30, which is dependent on claim 29, King teaches scaling individual images of the page layout obtained after said iteration (King, col.19, lines 1-4; col.40, lines 52-54; col.41, lines 1-10; col.46, lines 57-65; scale factors may be used to adjust components' fit in the layout process).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined King's iteration into Koba's analyzing layout process, since the combination would have helped to selecting the best page layout.

38. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over King in view of Koba and Seaman and further in view of Ross as applied to claim 29 above, and further in view of Bottomly, US 5,900,002, patented 1999.

Regarding claim 31, which is dependent on claim 29, Koba does not explicitly disclose rotating said images a predetermined amount.

Bottomly teaches a process by which regions of the page are rotated 180 degrees to aid in orienting (Bottomly, col.4, lines 21-31).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Bottomly and King to rotating said images a

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predetermined amount, since Bottomly's method of rotating 180 degrees would have aided in orienting in page layout.

39. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koba and in view of Seaman as applied to claim 16 above, and further in view of Burn, US 6,014,137, filed 02/1997.

Regarding claim 33, which is dependent on claim 16, Koba does not explicitly teach positioning said images in said selected page layout so as to provide a desired border on said page.

Burns teaches the use of window borders in a kiosk authoring system that would require image arrangement in order to present the user with an aesthetically pleasing layout (Burns, col.3, line 59).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Burns' border and King, since this would have presented the user with an aesthetically pleasing layout.

Response to Arguments

40. Applicant's arguments filed on 04/25/2005 have been fully considered but they are not persuasive.

Applicant argue with respect to claims 1, 16, 36-37 that King and/or Koba teaches predefined location for each of the image to be located and does not teach or suggest that "any one particular image can be located anywhere on the page".

Examiner respectfully disagrees. King teaches a particular image of plurality of image may be located any position, such as bottom, left, right, top based on user inputs (King, col.18, lines 15-56). Koba teaches grouping plurality of images and one of plurality of images may be located any position in said plurality of different page layouts based on user input information. For example, a particular image may be located at the middle, left or right position based on the different layouts which are selected by the user (Koba, figures 5C-5F). Therefore, King and/or Koba's teaching is perfectly matched what applicants claimed.

Applicants argue that claims 1, 5, 14-15, 38-39 are rejected under U.S.C. 102(a) as unpatentable over two references.

The examiner apologizes and agrees that an obvious typographic error has occurred. Now, the typographical error has been corrected.

Applicants argue that "[n]one of the additional references teach or suggest that any one of the plurality of images may be located in any position in said plurality of different page layouts".

Examiner respectfully disagrees. As discussed above, Koba and/or King teaches such limitation. Matsumura also teaches such limitation because Matsumura teaches automatic layout images including change sequence of image to be arrange and a user is able to selects arbitrary image form an image list to place the selected image at an arbitrary position in an arbitrary page (Matsumura, col.3, line 31 – col.4, line 38).

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Conclusion

41. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu V. Huynh whose telephone number is (571) 272-4126. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen S. Hong can be reached on (571) 272-4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TVH
October 20, 2005

William S. Bashore
WILLIAM BASHORE
PRIMARY EXAMINER
10/20/2005